



Follow-on Assessment Activities

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Overview



- The FAA and EUROCONTROL Activities
 - The FAA and EUROCONTROL have separately identified ADS-B link technology areas they would like to further investigate
 - FAA and EUROCONTROL are continuing to cooperate through information sharing
- FAA emphasis will be on supporting the detailed definition of ADS-B capabilities within in the future NAS architecture
 - detailed architecture definition is needed to support the investment analysis/decision for the ground ADS-B infrastructure
 - assessments will also support continued standards development activities

Multi-Link and Link Independent Investigations



- Assess the ADS-B performance on the airport surface
 - Safe Flight 21 will collect data on 1090ES and UAT at OpEval 3 in Memphis during May 2002
 - EUROCONTROL is a sponsor of a surface ADS-B evaluation at London Heathrow starting in Oct. 2001 with all three candidate ADS-B link technologies
- Investigations to address the security implications from the introduction of ADS-B into the NAS
 - Coordination through RTCA

Multi-Link and Link Ind. Investigations - ctd.



- Use of Ground Cross-Link Gateway
 - FAA sponsored investigations to assess the capabilities and limitations of the use of ground cross-link gateway to accommodate multi-link aircraft equipage
- EUROCONTROL investigations to validate a 1090ES/VDL-M4 multi-link configuration

1090 Extended Squitter Investigations



- Potential FAA Sponsored Activities
 - Modeling of the ground SSR interrogator infrastructure to reflect the next generation of SSRs that are now being procured by the FAA and DoD
 - Incorporation of more realistic aircraft traffic models
 - Modeling of enhanced decoding techniques (as defined in draft DO-260a)
- EUROCONTROL Sponsored Activities
 - new 1090ES simulation model under development that is expected to provide improved modeling of the core Europe environment

UAT Investigations



- Potential FAA Sponsored Activities
 - Assess receiver performance at different altitudes
 - Assess performance of different receiver configurations
 - switched receiver (switched between top & bottom antenna)
 - receive on bottom antenna only
 - Capacity of UAT data link to uplink FIS-B information to the cockpit and to downlink airborne information
 - TIS-B capabilities of UAT
- EUROCONTROL is following the FAA sponsored UAT assessment activities

VDL-M4 Investigations



- EUROCONTROL is sponsoring the development of a new VDL-M4 simulation model to support the more complex link characteristics:
 - rapid net entry
 - incremental broadcast
 - combined periodic/incremental broadcast
 - change of transmission rates
 - ground slot reservation
 - regional and local channels
 - TIS-B and Directory of Service (DoS) uplinks
 - multi-slot messages (TCPs, DoS, etc)
 - aircraft movement
 - allow for larger aircraft populations and geographic areas
- FAA is following the EUROCONTROL sponsored VDL-M4 investigations

Summary



- FAA is currently finalizing plans for follow-up ADS-B assessment activities
 - dependent on available FY-2002 funds and agency priorities
 - FAA emphasis for link assessments will be on additional 1090ES, UAT and multi-link investigations
 - FAA is following the EUROCONTROL sponsored VDL-M4, 1090ES and multi-link investigations
 - A more detailed economic analysis will be performed for the selected ADS-B link architecture to support an investment decision
- The FAA ADS-B link decision is not dependent on the results from the follow-on ADS-B link assessments
 - additional assessment results may impact the details of the FAA ground ADS-B architecture including transition steps